

L Number	Hits	Search Text	DB	Time stamp
1	280	(549/315).CCLS.	USPAT; EPO; JPO; DERWENT; USOCR	2002/10/04 14:30
2	74693	sulfite	USPAT; EPO; JPO; DERWENT; USOCR	2002/10/04 14:31
3	13	((549/315).CCLS.) and sulfite	USPAT; EPO; JPO; DERWENT; USOCR	2002/10/04 14:34
4	283	549/315	USPAT; US-PGPUB; EPO; JPO; DERWENT	2002/10/04 14:35

Ent search 10/036912

Chem. Abst. search attached

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DICTIONARY FILE UPDATES: 3 OCT 2002 HIGHEST RN 459123-02-5

TSCA INFORMATION NOW CURRENT THROUGH MAY 20, 2002

Please note that search-term pricing does apply when
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Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. See HELP
PROPERTIES for more information. See STNnote 27, Searching Properties
in the CAS Registry File, for complete details:
<http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf>
'REGISTRY' IS DEFAULT FORMAT FOR 'REGISTRY' FILE

=> s ascorbic acid/cn
L7 2 ASCORBIC ACID/CN

=> fil caplus

FILE 'CAPLUS' ENTERED AT 14:24:05 ON 04 OCT 2002
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FILE COVERS 1907 - 4 Oct 2002 VOL 137 ISS 15
FILE LAST UPDATED: 3 Oct 2002 (20021003/ED)

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*** YOU HAVE NEW MAIL ***

=> s sulfite?

L8 57341 SULFITE?

=> s 17 and 18

46135 L7

L9 664 L7 AND L8

=> s 17/p

L10 859 L7/P

=> s 17 and 18

46135 L7

L11 664 L7 AND L8

=> s 18 and 110

L12 10 L8 AND L10

=> d tot abs

L12 ANSWER 1 OF 10 CAPLUS COPYRIGHT 2002 ACS

AB The present invention comprises the use of **sulfite** additives to reduce discoloration of L-ascorbic acid produced from acid or aq. solns. of 2-keto-L-gulonic acid. In one aspect, the present invention comprises a continuous process for producing L-ascorbic acid from an aq. soln. of 2-keto-L-gulonic acid. The use of **sulfite** additives reduces product stream color and improves product recovery by binding to high mol. wt. reaction byproducts. In a continuous process, the reaction stream is sepd. from residual **sulfite** and **sulfite**-bound byproducts to produce a product stream enriched in aq. ascorbic acid for recovery, and an enriched 2-keto-L-gulonic acid stream which is recycled to the reactor. The in situ use of **sulfite** additives during the reaction increases the overall yield of L-ascorbic acid, with no loss in selectivity of the synthesis.

L12 ANSWER 2 OF 10 CAPLUS COPYRIGHT 2002 ACS

AB A method and app. for large scale prodn. of a product of in vivo medicine carriers for medicine administration. The reagents are prepd. in soln. and contained in resp. bags. A series pumps and mixing chambers are connected to the reagent bags. The pumps are set at pre-detd. rates and activated in a pre-detd. sequence within resp. pre-detd. delay periods, to achieve instantaneous component mixing and controlled sequential mixing characteristics.

L12 ANSWER 3 OF 10 CAPLUS COPYRIGHT 2002 ACS

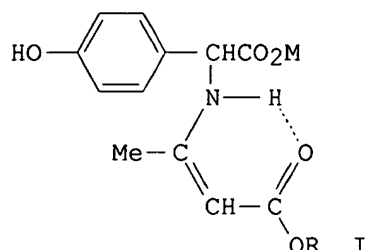
AB The optimal oxygen supply during two-step fermn. of vitamin C with Acetobacter melanogenus, Bacillus cereus, and Gluconobacter oxydars was investigated. The oxygen-supplying ability of the app. was measured with **sulfite** test. The result showed that too strong agitation and aeration was not necessary during 2nd step fermn., its oxygen demand was only 50% of that during 1st step fermn. Both too high or too low supply of oxygen would reduce the rate of biotransformation.

L12 ANSWER 4 OF 10 CAPLUS COPYRIGHT 2002 ACS

AB Fresh edible green leaves from Celosia argentea, Amaranthus hybridus, Solanum nodiflorum, and Corchorus olitorius had high contents of ascorbic acid. About 47-58% and 25-33% of the ascorbic acid was lost in the leaves by water- and steam-blanching, resp. In the blanched but undehydrated

leaves, the ascorbic acid content of the product decreased during storage at ambient temp. A loss of about 54-64% was obsd. after 5 mo of storage. The steam-blanching and dehydrated vegetable leaves had little loss of ascorbic acid in storage for 6 mo. Na₂SO₃-Na₂S₂O₅ (3:1) significantly enhanced the retention of ascorbic acid in the processed leaves.

L12 ANSWER 5 OF 10 CAPLUS COPYRIGHT 2002 ACS
GI



AB The title compds. I (R = C1-3 alkyl; M = alkali metal) (Dane salt), useful as intermediates for .beta.-lactam antibiotics, e.g. amoxicillin, cefadroxil, cefatrizine, etc., are prepd. by condensation of D-(-)-p-hydroxyphenylglycine (II) alkali metal salts with acetoacetic acid esters under heating in org. solvents in the presence of N or reducing agents to prevent oxidn. during the reaction and storage. KOH and NaHSO₃ were dissolved in MeOH with stirring at 25-30.degree. and treated with II at 25-30.degree. for 1 h. The above reaction mixt. was refluxed with MeCOCH₂CO₂Me for 2 h to give 93% I (R = Me, M = K) (III). APHA (American Public Health Assocn.) color no. of III, stored in a sealed container at 60.degree. for 15 days, shifted from 6 to 9, vs. 30 to 130 for a control without addn. of NaHSO₃.

L12 ANSWER 6 OF 10 CAPLUS COPYRIGHT 2002 ACS

AB The title agents for efficient chromation of azo dyes, which may also be used in alk. media, contain Cr ions formed by Cr₂(CrO₄)₃ 1-20, Cr³⁺+Ln [L is a ligand (H₂O, reducing agent, or an oxidn. fragment of the agent); n = 1-6] ions 5-95, and Cr⁴⁺ 0.1-5%, and is prepd. by partial or total redn. of alk. chromates or dichromates. Alk. **sulfites** and bisulfites, NH₂OH, oxalic acid, ascorbic acid, glucose, EtOH, etc. are used for the redn. The reaction mixt. contains ions without stable coordination structures and gives quant. metalation of the dye. Thus, an agent was obtained by heating K₂Cr₂O₇ 1, oxalic acid 2, and H₂O 15 parts to 60-70.degree. until the evolution of gas ceased.

L12 ANSWER 7 OF 10 CAPLUS COPYRIGHT 2002 ACS

AB An O-scavenging agent is produced by firing a S-contg. fuel in a flue gas generator to generate a flue gas contg. SO_x and scrubbing the flue gas with an aq. NaOH soln. contg. ascorbic acid [50-81-7] in a reactor vessel to form Na₂SO₃ and NaHSO₃, whose oxidn. is inhibited by the ascorbic acid. The **sulfite** salts and the ascorbic acid are recovered for use as an O-scavenging additive.

L12 ANSWER 8 OF 10 CAPLUS COPYRIGHT 2002 ACS

AB Heavy leaching losses of acids, sugars, and ascorbic acid [50-81-7] were obsd. during blanching in boiling water and sulfitation of raw mango pieces of Totapuri and Seedling cultivars. The leaching losses in ascorbic acid were more during blanching than sulfitation. There were greater losses of ascorbic acid in Totapuri and sugars and acids in Seedling during sulfitation than during blanching.

L12 ANSWER 9 OF 10 CAPLUS COPYRIGHT 2002 ACS

AB Peeling potatoes with a knife peeler gave a smooth surface, which was not achieved with a carborundum peeler. Chem. peeled potatoes were not suitable for sale as new potatoes. Carborundum peeling caused a 11.5-17.1% loss of vitamin C [50-81-7]. A 1.5-min immersion of knife-peeled potatoes in 2% Na2S2O5 controlled browning more effectively than did Na2SO3 or vitamin C dips.

L12 ANSWER 10 OF 10 CAPLUS COPYRIGHT 2002 ACS

AB The retention rates of ascorbic acid [50-81-7] and thiamin [59-43-8] in extruder-processed potato flakes were studied over a wide range of processing conditions. Factors decreasing ascorbic acid retention during extrusion were water and temp. Thiamin retention was lowest in low-moisture products. The low retention rates calcd. for thiamin were probably due to the antagonism of **sulfite** and high shear force being dissipated in the extruder.

=> d 1 cbib

L12 ANSWER 1 OF 10 CAPLUS COPYRIGHT 2002 ACS

2002:504774 Document No. 137:63425 Process for producing ascorbic acid in the presence of a **sulfite**. Arumugam, Bhaskar; Collins, Nick; Boyd, Brendan; Perri, Steven; Powell, Jeffery; Cushman, Michael (Eastman Chemical Company, USA). PCT Int. Appl. WO 2002051827 A1 20020704, 44 pp. DESIGNATED STATES: W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG, TR. (English). CODEN: PIXXD2. APPLICATION: WO 2001-US49859 20011221. PRIORITY: US 2000-PV257991 20001222; US 2001-PV314999 20010824.

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